

Fact Sheet

Purpose of this Document

The Utah Division of Solid and Hazardous Waste (the Division) intends to issue a Resource Conservation and Recovery Act (RCRA) treatment permit to Deseret Chemical Depot (DCD). This document provides a brief description of the permitting process and the permitted activity. The administrative record required by R315-3-24 containing correspondence and other documents used in preparation of this permit is also available for review. R315-3-25 requires the Division to prepare a fact sheet.

Permitting Process

The Division has authority under 19-6-101 through 19-6-123 of the Utah Solid and Hazardous Waste Act to issue permits to persons that store or treat hazardous waste. A permit must be issued before the storage or treatment activity begins. The permitted activity will be treatment of chemical agent identification sets (CAIS), Utah waste code P999, in a unit called the Rapid Response System (RRS). The items to be treated do not contain explosives.

The first step in the permitting process is preparation and submittal of a permit application by the applicants (DCD and Teledyne Brown Engineering). The Division then reviews the application to ensure it meets all requirements of the hazardous waste regulations. After the permit application is revised by the applicant to meet all requirements, the Division issues a notice of completeness and a draft permit for public comment.

The comment period lasts 45 days and a public hearing is held near the end of the comment period. Notice of the comment period is published in local newspapers and is announced on the radio and is sent to persons that have requested to be included on a mailing list maintained by the Division. The Division responds to all public comments and makes changes to the draft permit as necessary. **The comment period for this permit started June ****, 1998 and ends July ***, 1998. A public hearing will be held June ****, 1998, at 6:00 PM in the auditorium of the Tooele County Courthouse. Written comments regarding the DCD RRS treatment permit should be sent to:**

Dennis R. Downs, Executive Secretary, Utah Solid and Hazardous Waste Control Board
P.O. Box 14880
Salt Lake City, Utah 84114-4880

A copy of the permit is available for public inspection at:

Utah Division of Solid and Hazardous Waste, 4th Floor Martha Hughes Cannon Building
288 North 1460 West
Salt Lake City, Utah
Hours: 8 AM to 5 PM, Monday through Friday

Permitted Activity

The U.S. Army Desert Chemical Depot (DCD) submitted an application for an RD&D permit for the Rapid Response System. The Rapid Response System is designed as a mobile unit that can be taken to various locations where CAIS need to be removed and demilitarized.

The approximate amounts of mustard (blister), nerve agents and phosgene that will be treated under this permit include:

Agent	Total Agent	Total Items	General Munition Types
Mustard (HD)	300 pounds	17	4.2 inch mortar or equivalent cylinder M47 or equivalent cylinder Other cylinders simulating munitions
Nerve (GB)	150 pounds	47	4.2-inch mortar or equivalent cylinder Stokes mortar or equivalent cylinder Other cylinders simulating munitions
Nerve (VX)	225 pounds	28	155 mm or equivalent cylinder 8 inch projectile or equivalent cylinder Other cylinders simulating munitions
Phosgene (CG)	1,000 pounds	15	155 mm projectile or equivalent cylinder M78 or equivalent DOT cylinder DOT cylinders (various sizes)

The waste treatment process is relatively simple in concept and includes three main steps: 1) removing the CAIS vials from overpack containers and other packing material; 2) mixing the agent with excess amounts of decontamination solution and treating the agent in a treatment vessel; and 3) sampling and analyzing the waste to determine if treatment is complete. Waste residues generated from the process may contain chemical agent at concentrations up to 50 mg/l and may contain metals and other RCRA constituents. The waste will be characterized and sent to an off site hazardous waste incineration facility.

Monitoring

The demilitarization of chemical agents HD, HN-1, HN-3, and L produces two main waste streams, gas and liquid. Both waste streams are sampled to ensure that the Rapid Response System is operating properly and is not releasing agent into the environment.

Gas flow through the waste gas management system is routed through a waste gas treatment system, and ultimately to the atmosphere. This system includes several carbon filtration components. The carbon filters are designed to remove all chemical agent from the waste gas, thereby eliminating all pathways of exposure outside the treatment unit. Carbon filters that are located at the system exhaust. Monitoring devices capable of collecting waste gas samples are located between the carbon filters. These samples are used to show that the carbon filters are functioning properly. If agent is detected by a filter monitor, the treatment process is halted and the contaminated filter is removed and replaced as soon as possible.

The liquid waste is sampled and analyzed for chemical agent content at Mobile Analytical Support Platform. The waste is not released from Army control until analysis verifies that the agent concentration in the waste is 50 mg/l or less. If necessary, additional treatment will be done until the 50 mg/l treatment requirement is met. After waste treatment is verified, the waste is analyzed for metals and other RCRA constituents at a commercial laboratory.

Significant Methodological and Policy Questions

During the permitting process for the Rapid Response System, four methodology issues and two policy issues were identified. The method issues included: (1) the ability of analytical methods to detect chemical agent in solutions designed to decontaminate agent; (2) the ability of the gas processing system to adequately treat chemical agent; (3) the adequacy of and detection level for waste gas monitors; and (4) the treatment level and treatment goal.

The treatment level of 50mg/l is based on best available analytical technology detection limits. The detection of chemical agent in decontamination solution is difficult because the decontamination solution is designed to destroy the agent. This makes it difficult to recover chemical agent at very low levels from quality control samples spiked with chemical agent. The Army expects that by treating the chemical agent for 15 minutes, the agent will be treated to levels of 1 mg/l or less.

The two main policy issues included: (1) the degree to which the MMD-1 could be setup and tested before the permit was issued; and (2) health risk, safety and contractual issues related to management of waste by a transporter and at permitted incineration facilities outside of Army control.

Risks associated with management of neutralized chemical agent wastes were addressed as part of the permitting process.

Standards for operation and closure are based on values presented in documents prepared by the U.S. Army and the U.S. Surgeon General. For example, the U.S. Army Surgeon General vapor limits for the permissible 8 -hour work place exposure to chemical agent vapor and the Surgeon General drinking water standards are both used as standards in the permit. These standards are used to show that the system has been adequately decontaminated for reuse.

The draft permit requires that special arrangements be made between the Army and off site waste

managers. These conditions are designed to reduce risk to workers at off site laboratories and waste management facilities.

Review of Permit Contents

The permit includes three modules and 11 attachments. The modules specify basic legal, inspection and operating conditions. The attachments detail bench scale testing of agent mixed with decontamination solution and procedures for waste analysis, waste processing, system operation, inspections, emergency procedures, security, monitoring, personnel training and closure. The Administrative record lists other documents that were reviewed as part of the permitting process for the Rapid Response System.

Regulatory Requirements

The specific regulatory requirements applicable to the Rapid Response System are found in R315-3-1, 3-5, 3-6, 3-7 through 3-17, 3-23 through 3-29, 8-1 through 8-5, 8-7 through 8-10 and 8-16 for miscellaneous units. The requirements describing the public involvement process are (R315-3-24 through 3-29) attached to this fact sheet.